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EVALUATION OF ANTIPYRETIC ACTIVITY OF HERBO MINERAL FORMULATIONS JWARAMURARI RASA IN ALBINO RATS

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ABSTRACT

Introduction: Jwaramurari Rasa is one of herbo mineral & a classical antipyretic formulation to relieve all kind of fever mentioned in Rasendra sarasangraha. It contains few ingredients & easily available in the market with economical cost. **Material&Method**: Jwaramurarirasa, paracetamol, albinorats, baker'yeast formed the material and baker'yeast induced hyper pyrexia method was followed in the study. **Results & discussion:** Analytical results shown Presence of Hg=0.56%, S=1.31%, B=3.32%, phyto –chemical constituents alkaloids, flavonoids, steroids, saponins aconitine, Lappaconitine, gingerol and piperidine, piperine, chebulinic acid. Significant antipyretic activity was observed from first hour of the drug administration in both test & paracetamol group but antipyretic activity was sustained upto 9th hour in test group while it was only up to 5th hours in standard group. **Conclusion**: Jwaramurarirasa has shown significant antipyretic activity than Paracetamol. The components of Jwaramurarirasa might have contributed towards sustained antipyretic activity.

KEYWORDS: Jwaramurari Rasa.Paracetamol, Bakers yeast, Antipyretic activity.

INTRODUCTION

Fever is a symptom of underlying disease. .Many modern antipyretics like paracetamol, nimusilide, aspirin, diclofenac etc are prescribed regularly, having adverse effect like epigastric distress, ulceration, dyspepsia etc. It is need of the hour to find a safe with multi therapeutic activity drug. Jwaramurarirasa is a herbomineral formulation considered to be a

potential antipyretic. To provide evidence base for antipyretic activity this study was undertaken.

MATERIAL AND METHODS

Material

Material for pharmaceutical study:

1. Shodhit vatsanabha, shodhit Hingula, shodhit Tankana, shodhit Jayapala, sunthi, Trikatu, Haritaki were taken for the preparation of Jwaramurari rasa.

   For Antipyretic activity:

2. 18 albino rats, Jwaramurari Rasa, carboxy methyl cellulose (control), Paracetamol (Standard) & bakers yeast (to induce hyperpyrexia) formed the material for experimental study.

Method

a) Pharmaceutical study- Jwaramurari Rasa was Prepared according to – Ref Rasendrasarasagraha 2/36.

b) Methods of Experimental Study.

1. The animals were starved for 24 hours and water ad. Libitum.
2. The digital tele thermometer cord was lubricated with borax glycerine and initial rectal temperature of the animals were recorded.
3. Preparation of 15% yeast solution; 15gms of freeze dried baker's yeast (prestige yeast manufactured by SAF yeast. Co. Ltd, Mumbai) in 100ml of 0.9% normal saline. Every time fresh yeast solution was prepared and used.
4. Hyper pyrexia was induced by the parental administration of 1ml of yeast solution at nape region of the rats.
5. The medicines (test drug, standard drug and control drug) were administered, after 18 hours of administration of Baker's yeast.
6. The rectal temperature was noted using Dizital tele thermometer at 30 minutes intervals up to 9^{th} hr.

Drug schedule.

Sr.No	Group	No.of Rats	Drug	Dose
1	Test drug	6	Jwaramurari Rasa	2.25mg/200gms of Rats
2	Control drug	6	Carboxy methy cellulose	1ml
3	Standard drug	6	Paracetamol	9mg/200gms of rats

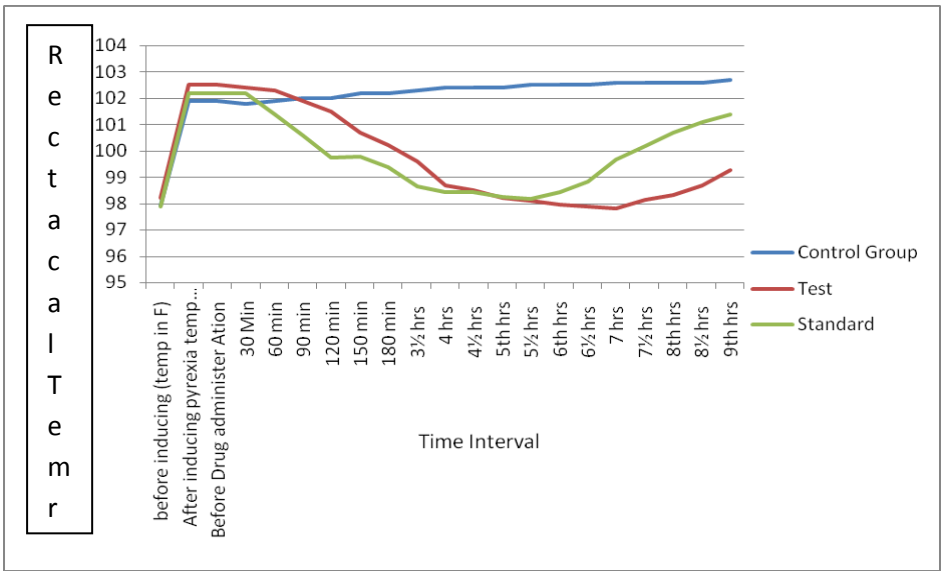
OBSERVATIONS

After the administration of Baker's yeast all the albino rats were closely observed for their behavior and temperature in all the rats.

1. In all the rats increase in temperature was noted after 18 hours of Baker's yeast administration.
2. Rats were less active.
3. All the rats were facing downwards after 12 hours.
4. Shivering & Furrl erection were observed in most of the rats after 4 hours.
5. In control group there was continuous increase in temperature 101.9+_ 0.518 to 102.7 +_ 0.472 at 9^{th} hour, as CMC does not possess any antipyretic activity & to save the rats paracetamol was administered.
6. Jwaramurari Rasa (Test drug); shown significant antipyretic activity s from first hr & sustained upto 9 hours of drug administration and the rats were healthy and active in test group.
7. Paracetamol (standard drug) has shown significant antipyretic activity from 1 hour to 6^{th} hour of drug administration. Rats were less active than test group.

Graph

Line Daigram showing the antipyretic Activity of Group1(Control Group), Group2 (Test Group) & Group3 (Standard Group).



DISCUSSION

From this observation it clearly indicates Jwaramurari Rasa has shown highly significant anti pyritic activity (at P=0.0001) and was sustained up to 9 hours in comparison with paracetamol (6th hours). Rats were healthy and active in test group due to presence of phyto –chemical constituents alkaloids, flavonoids, steroids, saponins aconitine, Lappaconitine, gingerol and piperidine, piperine, chebulinic acid & elements Hg=0.56%, S=1.31%, B=3.32% in Jwaramurari Rasa than control & standard. In control group antipyretic activity was not observed.

CONCLUSION

Paracetamol may act as only antipyretic but Jwaramurarirasa contains useful phytochemical constituents which contribute for antioxidant and rejuvenative along with its sustained antipyretic activity.

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